SPOOL FILE MANAGEMENT

for IBM iSeries / i5

Familiarisation

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1. Manual organisation

This manual is dedicated to rapid discovery and familiarisation with QUICK-SPOOL.

It does not in the least claim to present all the program functions in detail, nor to present them all, but more to show the current functions related to Spool File Management in a simple way.

In the following pages you will discover the following different themes:

- **Installation of the product on an AS/400 system**

- **Supervisor start**
  - Start up automation

- **Access to spool files**
  - Standard access0}
  - Access through the different system indexes offered by QUICK-SPOOL

- **Operating functions**
  - Secure spool file storage
    - ↳ Compression in object form
  - Indexing of a DSPOBJD type standard output
    - ↳ Splitting using criteria

- **Task automation**
  - Real time automation
    - ↳ Automating splitting
    - ↳ Archiving the document
  - Periodic processes
    - ↳ Output queue balancing example

2. Installation – Start up

2.1. Set up program

QUICK-SPOOL does not require initial set-up. It may therefore be installed and used immediately using the following instructions:

- **Acceptance of specific objects**

  If the system value "QALWUSRDMN" does not contain the value *ALL, you must add the program libraries:

  CHGSYSVAL QALWUSRDMN

  Add the libraries PMSPO and PMSPL to the defined list.

  *Note: This modification authorises both libraries to contain "*USRSPC" and "*USRIDX objects type.*

- **Set up program**

  - Library must be created before:

    CRTLIB LIB(PMSPO) TEXT('Spool File Management')

  - Restore objects from the CD-Rom:

    RSTOBJ OBJ(*ALL) SAVLIB(PMSOFT.FR) DEV(OPT01) +
    RSTLIB(PMSPO) OPTFILE('AS_OBJ.FR/QuickSPO.FRO')

    (Replace 'FR' by the desired language code)

  This command restores to the system the **PMSPO** library objects that contain all of the software components.

- **Environment SET-UP**

  Add the library to the job library list

  ADDLIBLE PMSPO

  Create the QUICK-SPOOL environment

  CALL PMSPOPEN

This command creates all the objects required for the operation of the software on the installed site, and mainly:

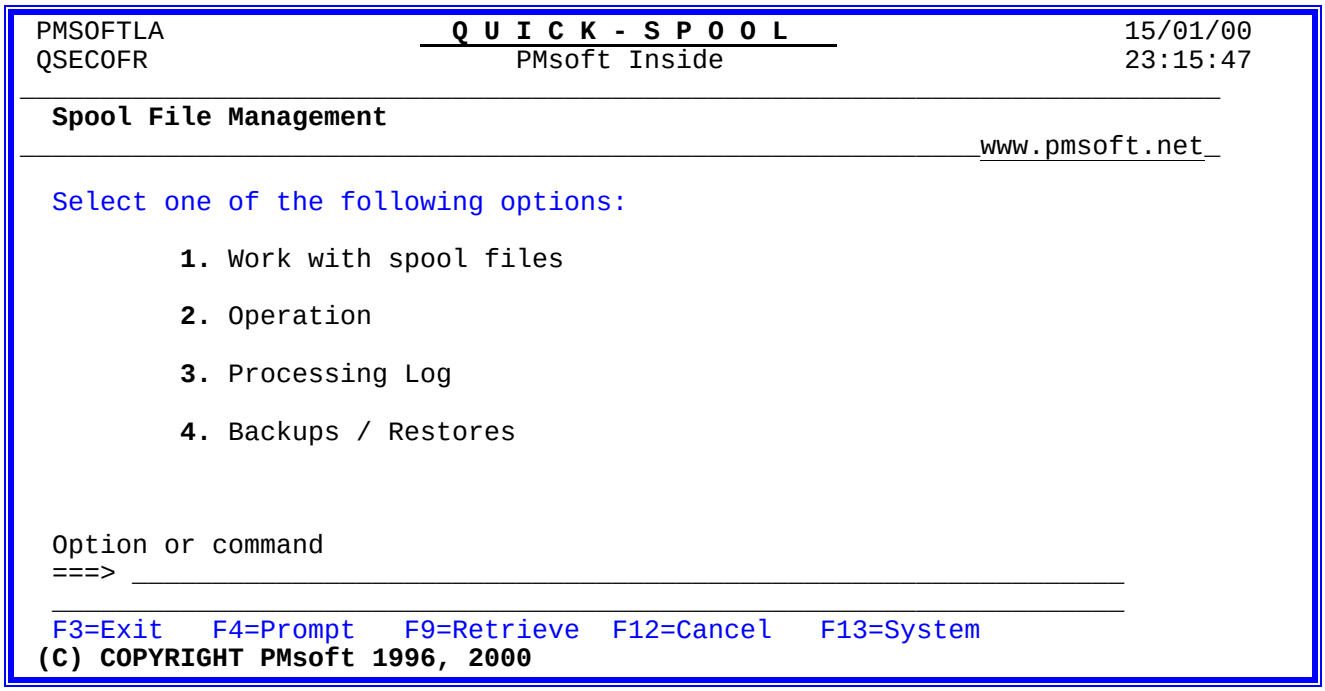
- The PMSPL library, containing all parameters for the site
- The description of the PMSPO subsystem in which the supervisor jobs and the related objects (JOBQ, JOBD) run
- The different indexes used for Spool File Management

- **Start**

  Run the PMSPO command

2.1.1. Main menu

Assignment to the QUICK-SPOOL menu is done using the "PMSPO" command. This command, which has no parameters, causes the display of the main menu.



Available function keys:

F3=Exit	End of job; back to main menu
F4=Prompt	Displays the prompt command when a command is entered
F9=Retrieve	Retrieves previous command
F12=Cancel	Back to the previous screen
F13=System	Displays the system and remote maintenance menu

2.2. Start

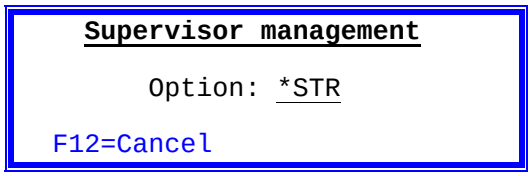
Spool management functions via QUICK-SPOOL are only accessible after starting its supervisor. This must always remain active so as to provide the real time functions for all current and future printing.

2.2.1. Supervisor start

The QUICK-SPOOL "Operation" menu offers supervisor management.

Access: **Main menu**
↳ Option "2" - Operation menu
↳ Option "1" – Supervisor management

Executing this option gives the following window:



Press ENTER to start the supervisor

Note: ***The PMSPOCTL command offers the same options and functions***

2.2.2. Supervisor start up scheduling

To ensure continuous supervisor activity it is possible to automate start up at system IPL. To do this modify your system start up program (by default QSTS/QSTRUP) by adding the following lines:

ADDLIBLE LIB(PMSPO)

MONMSG MSGID(CPF0000)

PMSPOCTL OPT(*STR)

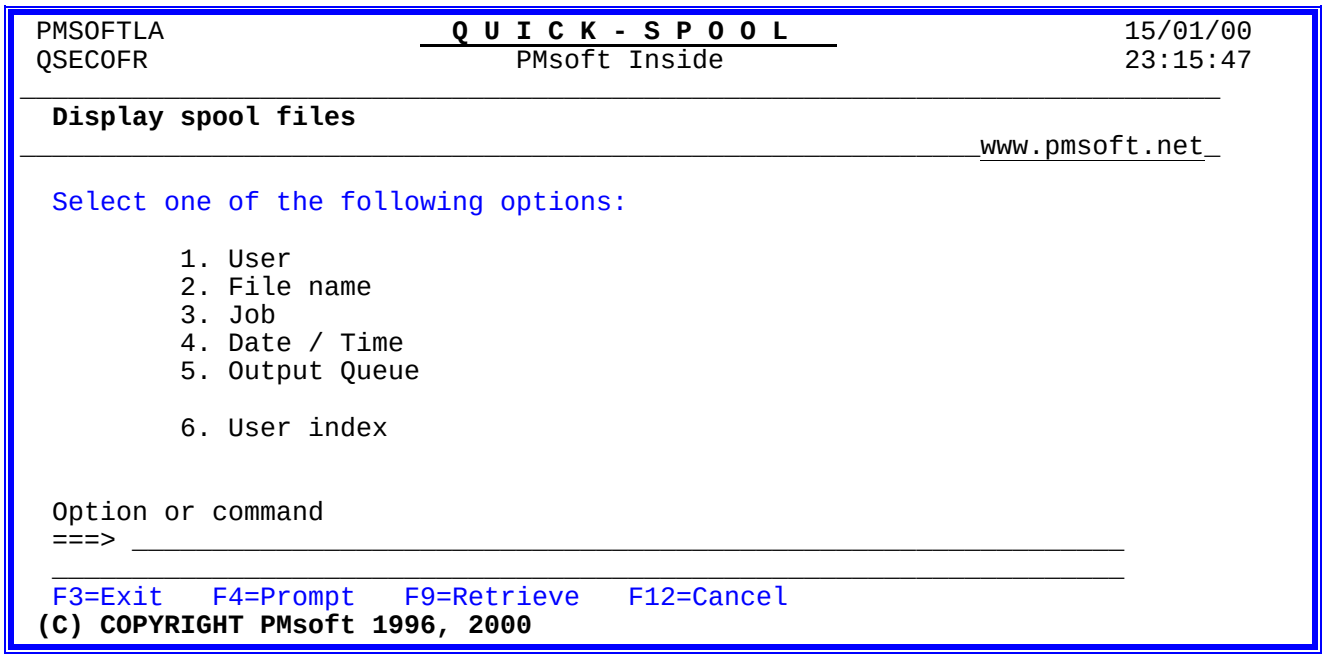
Note: *The QPGMR user profile that owns the start up job must have all rights over the PMSPO and PMSPL libraries.*

It must also be entered in the system distribution directory (WRKDIRE)

3. Spool File Management

Access to spool files is through the specific menu offering the different access criteria :

Access: **Main menu**
↳ Option "1" – Work with spool files
↳ Option "1" — Display spool files



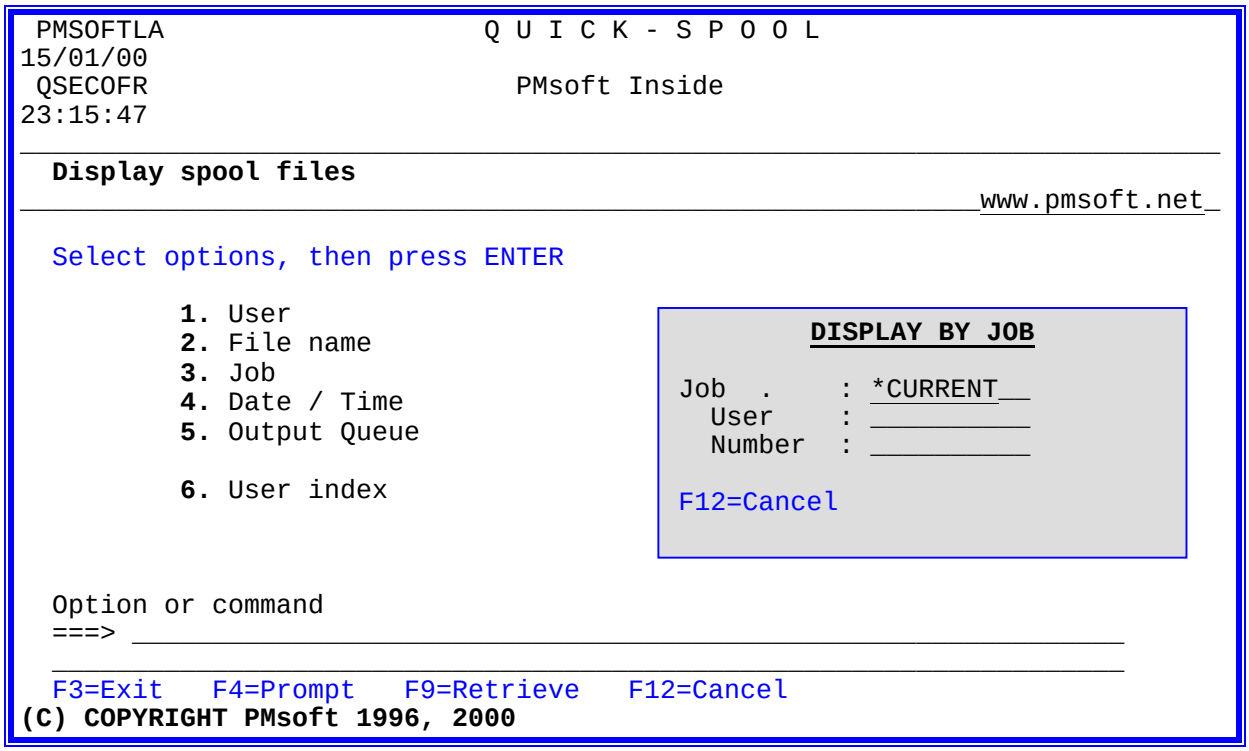
The menu displays the five standard accesses defined for the different indexes offered as standard by QUICK-SPOOL.

- Access to spool files for a user (or *all if authorised) – Corresponds to the standard WRKSPLF command
- Access by spool file name (and generic names)
- Access by job name (and generic names)
- Access by date and time (in descending order)
- Access by output queue – Corresponds to the standard WRKOUTQ queue

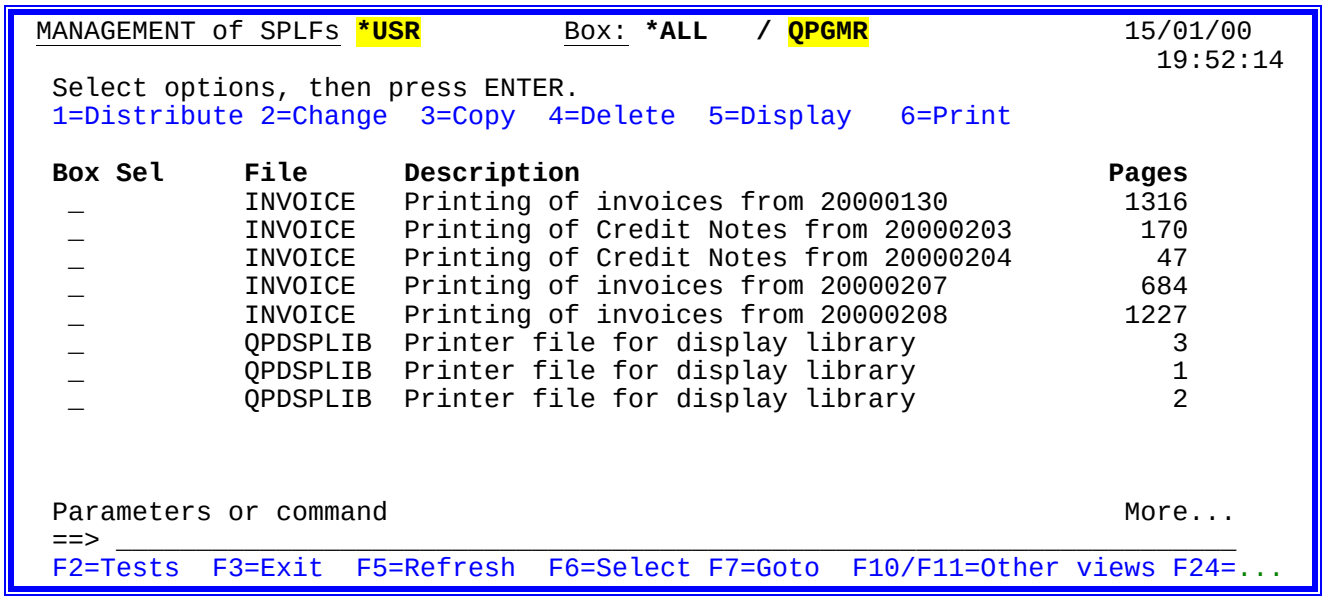
Option "6" will only be developed later in this manual.

3.1. "Work with spool files" interface

Each menu option causes the display of a preselection window. Depending on the option chosen, the user sees a display of values suitable for his environment (*CURRENT, *JOB …), or more general values (*ALL …).



Press Enter to display the files corresponding to your selection:


MANAGEMENT of SPLFs *USR Box: *ALL / QPGMR 15/01/00
19:52:14
Select options, then press ENTER.
1=Distribute 2=Change 3=Copy 4=Delete 5=Display 6=Print
Box Sel File Description Pages
_ INVOICE Printing of invoices from 20000130 1316
_ INVOICE Printing of Credit Notes from 20000203 170
_ INVOICE Printing of Credit Notes from 20000204 47
_ INVOICE Printing of invoices from 20000207 684
_ INVOICE Printing of invoices from 20000208 1227
_ QPDSPLIB Printer file for display library 3
_ QPDSPLIB Printer file for display library 1
_ QPDSPLIB Printer file for display library 2
Parameters or command More...
==> _____
F2=Tests F3=Exit F5=Refresh F6=Select F7=Goto F10/F11=Other views F24=...

The selected criterion and the selection value are repeated at the top of the screen (*USR / QPGMR)

On this screen, the following functions are **systematically** available (the interface uses the standard function keys from the IBM WRKSPLF command) :

- **F6=Select** Allows the selection of a box or all the boxes, and the modification of the profile in question, or access to spool files for "*ALL" (all users), if the profile has special rights ("*SPLCTL" or higher)
- **F7=Goto** Position to a box and / or a user
- **F17=Top** Automatic positioning at the start of the list
- **F18=Bottom** Automatic positioning at the end of the list
- **F2=Tests** Lets you define tests on any attribute to search for a print job more easily. This function key can be used in conjunction with the cursor position determining which attribute to test.
- **Display more detailed information**
  - Right / left lateral movement using function keys F19 / F20
  - Display of different views (if defined) using function keys F10 / F11

- **F22** Print spool file list

Note: The interface is completely parameter settable in terms of attributes displayed and executable options. For more detail on this function refer to the user manual, § User views.

3.1.1. The PMSPOWRK Command

The PMSPOWRK command, which substitutes for the menu options presented above, is intended for access to spool files, by directly specifying the desired index and user view.. It will be used in two distinct contexts:

- **Directly by the site operators and developers**, so as to offer them wide access to spool files, using all the available criteria
- **Included in user menus**, to offer selective access under the control of a previously defined view

The PMSPOWRK prompt command displays the following parameters

```
                    Management of spool files   (PMSPOWRK)

Select option, then press ENTER

Name of index used  . . . .   *USR______     Name, *USR, *PMID, *JOB...
  Library . . . . . . . . .     *LIBL_____   Name, *LIBL, *CURLIB
Box . . . . . . . . . . . .   *ALL______     Name, generic*, *ALL...
  Name  . . . . . . . . . .     *ALL_____________
View used . . . . . . . . .   *USRPRF___     Nom, *USRPRF, *IDX
  Library . . . . . . . . .     *LIBL_____   Name, *LIBL, *CURLIB
```

The name of the index used, by default "*USR" corresponds to the 5 options of the previously presented menu and can take the following values:

- *USR Access by User
- *FILE Access by file name
- *JOB Access by Job
- *DATE Access by date and time (descending)
- *OUTQ Access by output queue

Note: *The "box" name allows preselection of the spool files offered (see § Indexing)*

4. OPERATION

First: For our different examples below we will base them on a list of objects, a spool file present on all AS/400 systems. To create the spool file run the following command:

DSPOBJD OBJ(PMSPO/*ALL) OBJTYPE(*ALL) +
DETAIL(*FULL) OUTPUT(*PRINT)

This command produces a spool file of about 200 pages, containing the list of objects in the PMSPO library with one object per page.

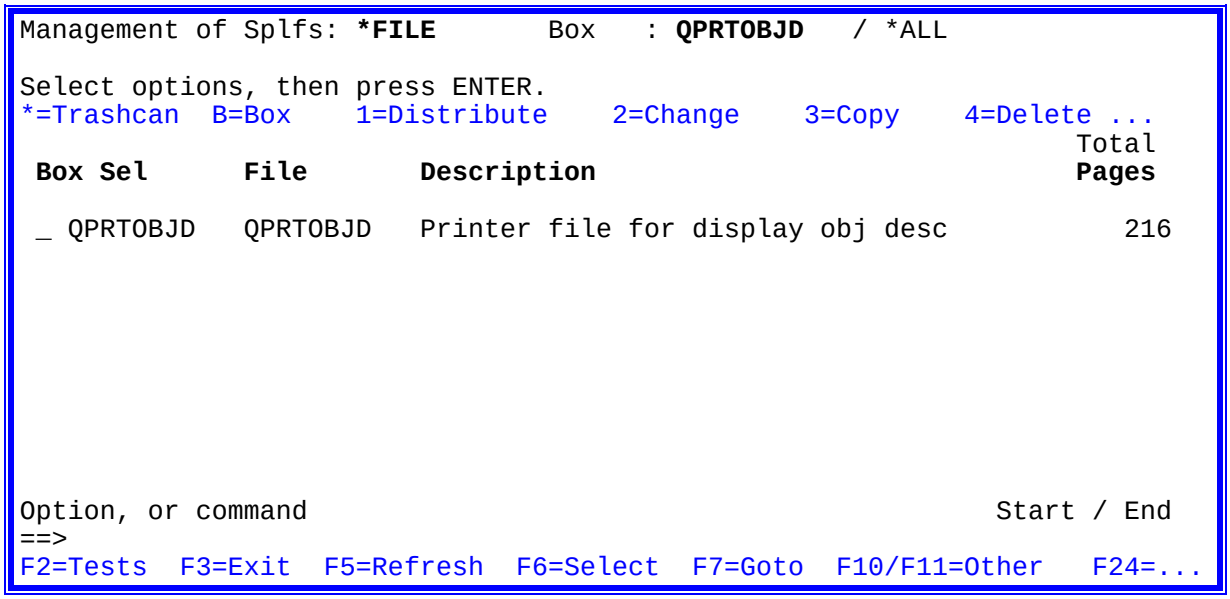
4.1. Secure spool file storage

Secure compressed storage comprises a conversion of the spool file into a *USRSPC type object in a user library (by default PMSPLF).

4.1.1. Search for the spool file

To display the previously crated file, use the menu options, as below:

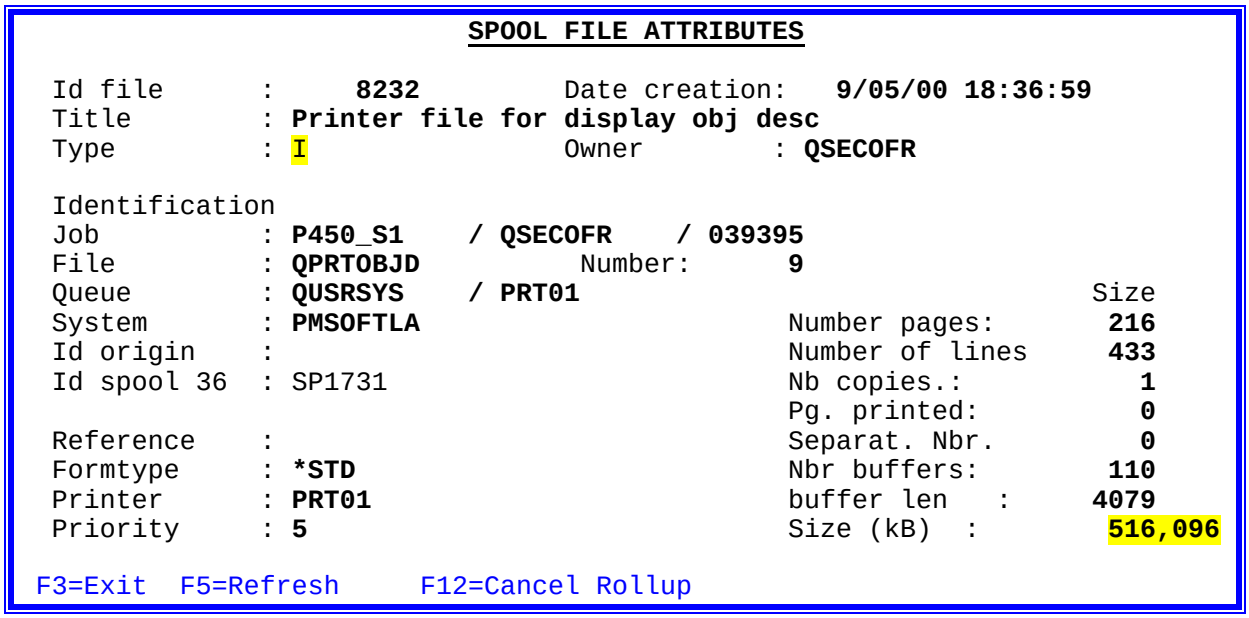
Access: **Main menu**
↳ Option "1" – Work with spool files
↳ Option "1" — Display spool files
↳ Option "2" — Name of File
↳ File : QPRTOBJD


Management of Splfs: *FILE Box : QPRTOBJD / *ALL
Select options, then press ENTER.
*=Trashcan B=Box 1=Distribute 2=Change 3=Copy 4=Delete ...
Box Sel File Description Total Pages
_ QPRTOBJD QPRTOBJD Printer file for display obj desc 216
Option, or command Start / End
==>
F2=Tests F3=Exit F5=Refresh F6=Select F7=Goto F10/F11=Other F24=...

Note: You can be offered several spool files if several DSPOBJD commands have been run on your system by different users.

4.1.2. Inspecting initial attributes

Before conversion we will display the detail of the attributes of our spool file; to do this run option "8" in the spool window. The following screen is then displayed


SPOOL FILE ATTRIBUTES
Id file : 8232 Date creation: 9/05/00 18:36:59
Title : Printer file for display obj desc
Type : I Owner : QSECOFR
Identification
Job : P450_S1 / QSECOFR / 039395
File : QPRTOBJD Number: 9
Queue : QUSRSYS / PRT01 Size
System : PMSOFTLA Number pages: 216
Id origin : Number of lines 433
Id spool 36 : SP1731 Nb copies.: 1
Pg. printed: 0
Reference : Separat. Nbr. 0
Formtype : *STD Nbr buffers: 110
Printer : PRT01 buffer len : 4079
Priority : 5 Size (kB) : 516,096
F3=Exit F5=Refresh F12=Cancel Rollup

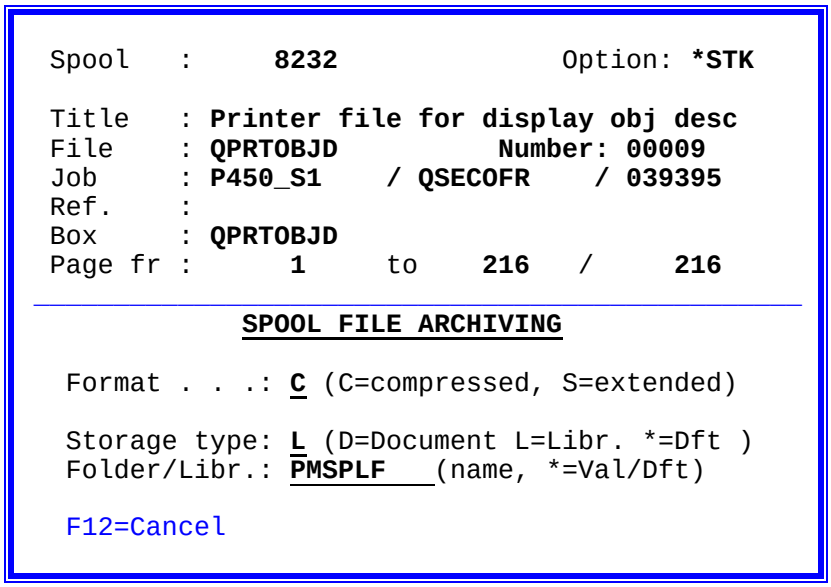
In addition to the standard spool file attributes, two information items will interest us :

- At top left the spool type. "I" indicates that the spool file is in IBM format (standard spool stored in QSPL)
- At bottom right, the disc space used by this spool file: 516 KB

↳ F12: Back to the previous screen

4.1.3. Compressed storage

By running option "A" in the spool file window, the storage function parameters window is displayed:


Spool : 8232 Option: *STK
Title : Printer file for display obj desc
File : QPRTOBJD Number: 00009
Job : P450_S1 / QSECOFR / 039395
Ref. :
Box : QPRTOBJD
Page fr : 1 to 216 / 216
SPOOL FILE ARCHIVING
Format . . .: C (C=compressed, S=extended)
Storage type: L (D=Document L=Libr. *=Dft)
Folder/Libr.: PMSPLF (name, *=Val/Dft)
F12=Cancel

↳ Press Enter

By default the function offers compressed mode (Format = C), library storage (type = L), and the default library (PMSPLF).

Press Enter to run the conversion.

After execution we note various important points emphasising the benefits of the solution:

- The processing speed. A few seconds have sufficed to perform the conversion (time depends on the system used)
- The transparency of the conversion for the user; effectively, the spool display is not changed and all the attributes are retained
- The complete availability of the spool file. Option "5" allows you to display this file as if it was in an OUTQ. In addition the page access time, even at the end of the spool is noticeably improved
- The spool can still be partially or completely printed (option 6=Print)

4.1.4. Checking attributes after conversion

Once the conversion has been done we will display the attribute detail for our spool file again; to do this run option "8" in the spool file window again. The following screen is then displayed

```
                          SPOOL FILE ATTRIBUTES

  Id file       :     8232          Date creation:   9/05/00 18:36:59
  Title         : Printer file for display obj desc
  Type          : C                 Owner         : QSECOFR

  Identification
  Job           : P450_S1     / QSECOFR     / 039395
  File          : QPRTOBJD           Number:      9
  Queue         : QUSRSYS     / PRT01                              Size
  System        : PMSOFTLA                        Number pages:      216
  Id origin     :                                 Number of lines:   433
  Id spool 36   : SP1731                          Nb copies.:          1
                                                  Pg. printed:         0
  Reference     :                                 Separat. Nbr.        0
  Formtype      : *STD                            Nbr buffers:       110
  Printer       : PRT01                           buffer len:       4079
   Priority     : 5                               Size (kB):         147,447
                                                  Residual Cpr.:      28 %

F3=Exit  F5=Refresh     F12=Cancel Rollup
```

First the retention of all the attributes can be noted, in addition the two previously checked attributes have been changed:

- At top left the spool type, initially set to "I" from now on shows "C", the attribute for a compressed spool file (spool now stored in PMSPLF)
- At bottom right the disc space used for this spool file has changed from 516 KB to 147 KB, which is a compression factor of 72 %
- An additional disc space gain is done at system level by the deletion of the *OUTQ job report, easing the management of jobs

↳ F12: Back to the previous screen

4.2. Indexing

Indexing is the preliminary function for processes such as splitting of merger of spool pages, depending on their internal criteria. Indexing allows the processing of spool file pages in place of complete spools

=> ***All processing functions will be available from the index***

In our example we will index our report containing the object list, with the aim of splitting by object type. This scenario will then be easily reproducible on application reports, to be split in accordance with a shop or agency code …

4.2.1. Indexing model

The creation of an indexing model is done by working directly on the spool file. Additionally we start from our spool list and we will use option 5=Display to show this. The following screen is then offered:

Access: **Spool file list**
Option "5" – Display spool

```
File    QPRTOBJD      Page       1 /     216   Line     5 /  66    Col   1 / 132
....+....1....+....2....+....3....+....4....+....5....+....6....+....7....+...
 5769SS1 V4R4M0  990521              Object description  - Complete attributes

 Object . . . . . :  PMPAG           Attribute  . . :
   Library  . . . . :  PMSPO          Owner  . . . . :    QPGMR
 Type . . . . . . . :  *PGM           Main group . . :    *NONE

 User defined information:
   Attribute  . . . . . . . . . . . :   1000131.09
   Text   . . . . . . . . . . . . . :   PMPAG - Main menu
 Creation information
   Creation Date / Time . . . . . . :   31/01/00  00:00:00
   Created by user  . . . . . . . . :   PMSOFT
   Created on the system  . . . . . :   PMSOFT
   Object domain  . . . . . . . . . :   *USER
 Modification/Utilisation Information
   Modification Date / Time . . . . :   27/03/00  12:09:55
   Collected usage data . . . . . . :   OUI
   Date last used . . . . . . . . . :

 F3=Exit  F6=Column  F8=Attributes  F10=Reformatting F11=Line   F12=Cancel   F1
```

The process comprises formatting the spool file so as to select only the criterion used for splitting. The operation will need the following different steps:

- Create a new model
- Definition of the basic PRTF file (automatic function)
- Specification of a model descriptive text and the type of formatting
- Selection of the line containing the splitting criteria
- On this line selection of the splitting criteria (deletion of other fields)
- Save the model, and execution

Step 1 – Model creation

Access: **Display spool files**

↳ F10 = Reformatting

```
                    REFORMATTING OPTIONS

Format used: *SELECT        (nom,*NONE,*SELECT)
      Spool:   *SPLF        (name, *SPLF, *SELECT, *USR)

Output type: _       0=Screen                          (*)
                     1=Printer                         (*PRINT)
                     2=page index        + library     (*PAGI)
                     3=File              + library     (*FILE)
                     4=Document PC-ASCII + file        (*DOC)
If type 2, 3 or 4:
Name Index, File or Doc. : *DFT         (name, *DFT, *USR)
  Library or file. . . . :   *DFT       (name, *USRDFT, *LIBL)
  Replacement allowed. . : 0            (0=no 1=add 2=yes)

F3=Exit  F6=Create F7=Reload  F10=Parameters  F12=Cancel
```

Create a new model

↳ F6 = Create

```
                    CREATE A MODEL

Spool   : QPRTOBJD    Format : IDXOBJD___

Repeat PRTF description : 1  0=No, 1=Yes

F12=Cancel
```

In our example we give the name IDXOBJD to our formatting; specify option "1" to use the PRTF file description.

↳ Press Enter

```
          REPEAT OF PRTF DESCRIPTION

 File PRTF . . . . :  QPDSPLIB__
    Library  . . . :   QSYS_____

F3=Exit  F12=Cancel
```

The PRTF file name and the library name automatically offered.

↳ Press Enter

```
                    GENERAL REFORMATTING PARAMETERS

Title . . . . . : Splitting by object type_____________

Line formatting   : 3   0=No reformat base line          (*     )
                        1=Sel. Fields same column        (*PRINT)
                        2=Spaced fields
                        3=Chained fields        (*PAGI or *FILE)
                        4=Framed fields " separated ;    (*DOC  )
                        5=Modified base line             (*PRINT)

Undefined line    : 1   (0=omit, 1=select)

Default output    : 0    0=Screen display                (*     )
                         1=Printer                       (*PRINT)
                         2=Page index                    (*PAGI )
                         3=File                          (*FILE )
                         4=PC document/Spreadsheet       (*DOC  )
Page break level  : 0    0=not used, 1/7-break level

 F8=Other parameters   F12=Cancel
```

Specify a label for our model and specify option "3" for the formatting type. Leave the other parameters at the standard values.

- ↳ Press Enter
- ↳ Press Enter
- ↳ Press Enter

Return to the spool file display; the right side of the screen will now show the line number and a format code related to the type of each line:

```
File    QPRTOBJD      Page      1 /    216   Line    5 /  66    Col   1 / 132
 Format  IDXOBJD    ....+....3....+....4....+....5....+....6....+.... Rp Fmt/Ln
5769S5769SS1V4R4M0  990521Object description – Complete attributes 9/      6  1
Object  . . . . . : PMPAG   Attribute  . . . . . :                        7  3
Library . . . . . : PMSPO    Owner . . . . . :  QPGMR                     8  4
Type  . . . . . : *PGM     Main group . . . . : *NONE                     9  5
User defined information:                                                10  7
Attribute  . . . . . :1000131.09                                         11  8
Text   . . . . . :PMPAG – Main menu                                      12  9
Creation information                                                     13 10
Creation Date / Time . . . . . :31/01/000000:00:00                       14 11
Created by user  . . . . . :Pmsoft                                       15 12
Created on the system  . . . . . :Pmsoft                                 16 13
Object domain  . . . . . :*USER                                          17 14
Modification/Utilisation Information                                     18 15
Modification Date / Time . . . . . :27/03/001212:09:55                   19 16
Collected usage data . . . . . :OUI                                      20 17
Date last used . . . . . :                                               21 18
Number days use  . . . . . :    0                                        22 19
Reinitialisation Date  . . . . . :                                       23 20
Modification by program allowed  . :YES                                  24 21
Audit information                                                        25 22

 F3=Exit  F6=Column  F8=Attributes  F10=Reformatting F11=Line   F12=Cancel   F1
```

Step 2 – Splitting criteria selection

Each line type has been automatically analysed by the module and receives a "line code". It will allow selection of a line type, then the field concerned.

Position the cursor on the "Object type" line

```
Type . . . . . :*PGM     Main group . :*NONE                  9  5
```

↳ Press F11=Line

```
Line detail   Formatted: Page:     1    Required line:  Format :   9 HPRTOBDF
    ....+....1....+....2....+....3....+....4....+....5....+....6....+....7
..1 Type . . . . . :*PGM     Main group . :*NONE
.71
141


                                    *SELECT 2 (0=no,1=yes,2=only,3=all)
Line detail Origin    :
..1 Type . . . . . :   *PGM            Main group . :    N
.71 ONE
141

F4=Del. field  F10=Reformat  F12=Cancel
```

↳ Press Enter

The screen no only shows lines of the same type (type 9). There are 216 (one per page).

```
File    QPRTOBJD      Page      1 /    216   Line    5 /  66    Col   1 / 132
 Format  IDXOBJD    ....+....3....+....4....+....5....+....6....+.... Rp Fmt/Ln
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5
Type . . . . . :*PGM     Main group . :*NONE                        9  5

 F3=Exit  F6=Column  F8=Attributes  F10=Reformatting F11=Line   F12=Cancel   F1
```

Second step, selection of the only field needed for splitting. To do this position the cursor on one of the lines again (from now on they are all identical):

```
Type . . . . . :*PGM     Main group . :*NONE                  9  5
```

↳ Press F10=Reformatting

The structure of the PRTF lines is then presented; option "2" is automatically offered on the description of the type "9" line

```
                          REPORT LINES DESCRIPTION
 Spool   : QPRTOBJD          Modelling: IDXOBJD

 Options: 1=Insert line after    2=Modify    3=Copy    4=Delete
          S=Selection (Out)   O=Omit the line

Opt Line    In/Out Line tested on Input
 2   09 HPRTO i o    Type  . . . . . :   ********        Main group
 _   07 HPRTO i      Object  . . . . . :   **********      Attribute. .
 _   08 HPRTO i      Library . . . . . :     **********    Owner
 _   01 HPRTO i      5769SS1 **************            Object description
 _   06 HPRTO i      5769SS1 **************            Object description
 _   47 HPRTO i      5769SS1 **************            Object description
 _   13 RPRTO i      Creation information
 _   18 RPRTO i      Modification/Utilisation Information
 _   25 RPRTO i      Audit Information
 _   27 RPRTO i      Storage Information
                                                              more ...
 F2=Save  F8=Control  F12=Cancel  F17=Top  F18=Bottom  F22=Print
```

↳ Press Enter

```
Line definition:   9  HPRTOBDF              Reformatting type... : 3

Input : 1    Completely described: 1    Required line: ---from---   ----to----
Output: 1    H/T type:  _ _   ovr: 0     Space before: line ___   +  ___

  1 ....+....1....+....2....+....3....+....4....+....5....+....6....+....7
Type . . . . . : *PGM           Main group . :*NONE
Type . . . . . : ********       Main group . :**
Type . . . . . : ********       Main group . :**********

Opt Zone   Col.read  Wd R Ope.  Edit   Opt: 1=Add 2=Upd 4=Dlt S=Sel O=Omit
_                                       Start of field definition
O              2  22   A EQ      1     Type . . . . . :
_  FLD00021   27   8   A         23     ********
O             43  22   A EQ      31    Main group . . :
O  FLD00022   69  10   A         53    **********

                                                                  Bottom
 F12=Cancel   F17=Top   F18=Bottom   F19=Left   F20=Right
```

Using the option "O=Omit", the fields not wanted in the model are omitted. Confirm the selection and return to the spool display

↳ Press Enter

↳ Press Enter

↳ Press Enter

Return to display; from now on it only shows the selected fields, in this case the object type:

```
File    QPRTOBJD      Page      1 /    216   Line    5 /  66    Col   1 / 132
 Format  IDXOBJD    ....+....3....+....4....+....5....+....6....+.... Rp Fmt/Ln
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5
*PGM                                                                    9  5

 F3=Exit  F6=Column  F8=Attributes  F10=Reformatting F11=Line   F12=Cancel   F1
```

Step 3 – Save the model

The model is now complete. It is advisable to save it, it will then be useable for all files of the same type.

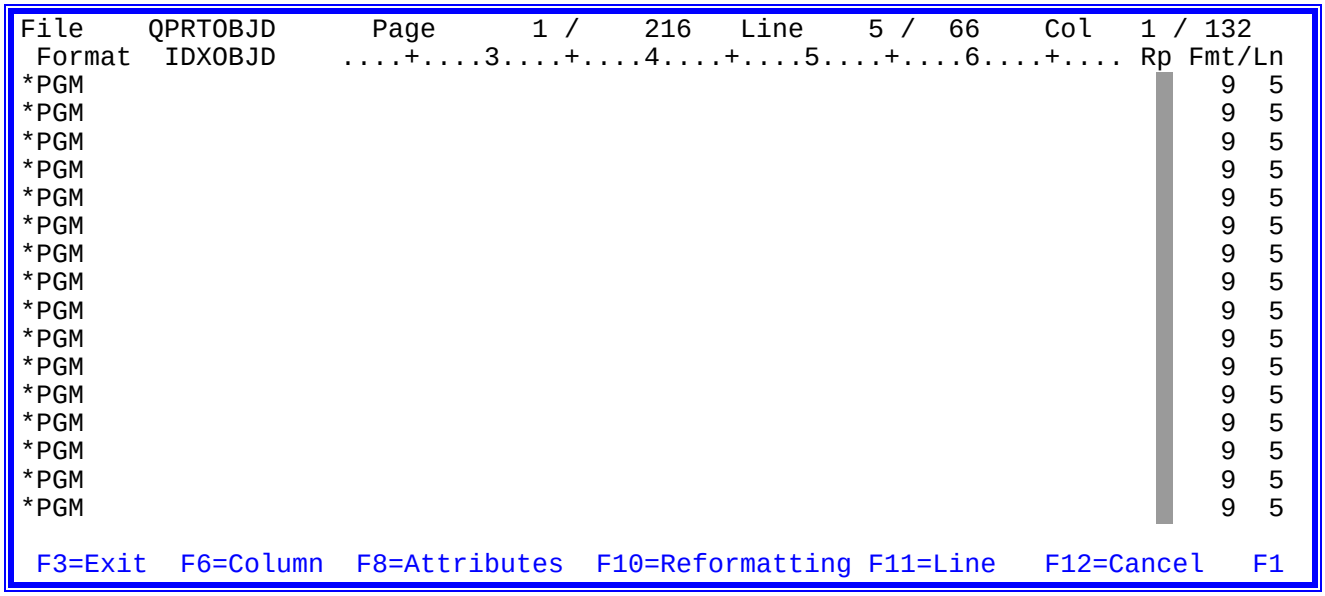
- ↳ F10=Reformatting
- ↳ F2=Save

```
                SAVING THE MODEL

Spool   :  QPRTOBJD     Format :  IDXOBJD

Splitting by object type

Save in ...             Object :  PMSPO_DLI
                        Library:    PMSPO_DLS

F12=Cancel
```

- ↳ Press Enter
- ↳ Press Enter

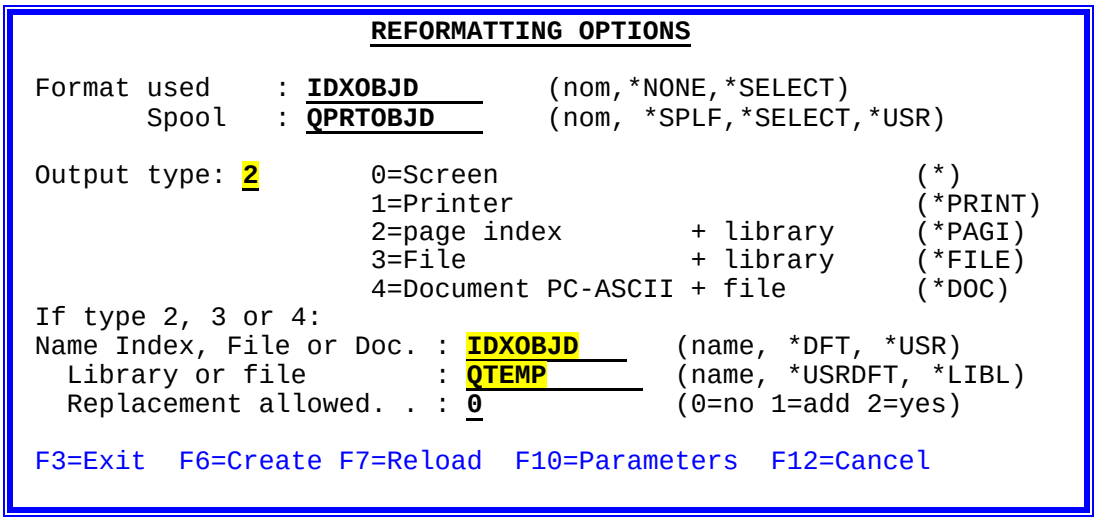
Step 4 – Model execution

The model is available. We will run it so as to produce a job index that will allow splitting a spool file.


File QPRTOBJD Page 1 / 216 Line 5 / 66 Col 1 / 132
Format IDXOBJD ....+....3....+....4....+....5....+....6....+.... Rp Fmt/Ln
*PGM 9 5
F3=Exit F6=Column F8=Attributes F10=Reformatting F11=Line F12=Cancel F1

↳ F9=Running the model.

Note: this option is deliberately hidden (normal execution in batch mode)


REFORMATTING OPTIONS
Format used : IDXOBJD (nom,*NONE,*SELECT)
Spool : QPRTOBJD (nom, *SPLF,*SELECT,*USR)
Output type: 2 0=Screen (*)
1=Printer (*PRINT)
2=page index + library (*PAGI)
3=File + library (*FILE)
4=Document PC-ASCII + file (*DOC)
If type 2, 3 or 4:
Name Index, File or Doc. : IDXOBJD (name, *DFT, *USR)
Library or file : QTEMP (name, *USRDFT, *LIBL)
Replacement allowed. . : 0 (0=no 1=add 2=yes)
F3=Exit F6=Create F7=Reload F10=Parameters F12=Cancel

Specify the type of output required "2=Index by page". Specify the name of the index to be created and its library.

Note: These working indexes are always create in the QTEMP library, because they are deleted after execution

↳ Press Enter => The model is run, the index is created

↳ F3=Exit =>=> R=> Return to the spooled file list.

↳ F3=Exit => Return to "Display spool files" menu

Step 5 – Viewing the index

The index created can be displayed. To do this use option 6 on the menu allowing access to a user index

Access: **Multiple access to spool files menu**

↳ Option 6 – User index

↳ ENTER

```
PMSOFTLA                    Q U I C K - S P O O L                    15/01/00
QSECOFR                        PMsoft Inside                        23:15:47
_____________________________________________________________________________
  Multiple access to spool files menu
                                                                  www.pmsoft.net

  Select options, then press ENTER

          1. User
          2. File name
          3. Job
          4. Date / Time
          5. Output Queue

          6. User index

                    ACCESS BY USER INDEX

                Index  . . . . . : IDXOBJD___
                Library. . . . . : QTEMP____

                F12=Cancel


  Option or command
  ===> 6_____________________________________________________________________
  _____________________________________________________________________________
  F3=Exit    F4=Prompt    F9=Retrieve    F12=Cancel
(C) COPYRIGHT PMsoft 1996, 2000
```

Specify the name of the previously created index.

↳ ENTER

```
  Management of Splfs: IDXOBJD      Box    : $SAV        / *ALL

  Select options, then press ENTER.
  5=Display  6=Print  8=Attributes
                                          No. of
     Key 1       Key 2       Key 3        pages __

  _  *CMD                                    76
  _  *FILE                                   36
  _  *JOBD                                    1
  _  *MSGF                                    4
  _  *PGM                                    81
  _  *PNLGRP                                  3
  _  *QRYDFN                                  1
  _  *USRSPC                                 14

  Option, or command                                        Start / End
  ==> _____________________________________________________________________
  F2=Tests  F3=Exit  F5=Refresh  F6=Select  F7=Goto  F10/F11=Other   F24=...
```

We have a list in alphabetic order of the different object type.

↳ F3=Exit => Return to "Display spool files" menu

Step 6– Splitting the spool file

We will now move to the physical splitting of the spool file pages0}

Note: This function is normally done in batch mode, a phase that we will cover in the following chapter on automations.

On the command line enter the command PMSPOMRGE, and call the operator guide using the F4 command key

Access: **Menu command line**

- ↳ Enter the command PMSPOMRGE
- ↳ F4 => Operator guide

```
                  Merging of a group of spool files (PMSPOMRGE)

 Select option, then press ENTER

 Name of index  . . . . . . . . > IDXOBJD    Name, *USR, *PMID, *JOB...
   Library    . . . . . . . . . > QTEMP     Name, *LIBL, *CURLIB
Index of spools to merge:
   Box or value 1 . . . . . . . > *ALL       alpha value, *CURRENT...
   Group or value 2 . . . . . . > *ALL       alpha value, *ALL...
   Name    or value 3 . . . . . > *ALL       alpha value, *ALL...
 Break report by box/grp/name   > *ALL       *BOX, *GRP, *NAME, *NONE
 User receiving . . . . . . . .   *JOB       *USR, *PMID, *JOB...
   User address or *LOCAL . . .   *LOCAL     Name, *LOCAL
 Printer or  Queue / User . . .   *USR       Name, *USR, *PMID, *JOB...
   Libr. or *DEV=print. *USR=user *DEV       Name, *USR, *PMID, *JOB...
 Local receiving box  . . . . .   $MRGOUT    Name, *OPT *STK
 Delete merged information . . .  *MRG       *YES, *NO, *MRG

                                                                   more ...
 F3=Exit   F4=Prompt   F5=Refresh      F12=cancel    F13=Help prompt
 F24=Other keys
```

Specify the parameters corresponding to the index and the break values:

- The name of the index previously created during modelling
- The index values (in our example all records)
- The break concept (*BOX indicates the main level)
- Option to address the resulting spools to a specific output queue (OUTQ), by default the same output queue OUTQ as the original spool is used
- Option to specify an individual user for reception

Press F10 to display additional parameters.

- ↳ F10 => Other parameters
- ↳ Scroll down => Next page:

```
                    Merging of a group of spool files (PMSPOMRGE)

Select option, then press ENTER

                           Other parameters

Number of Banners: . . . . .
Number of copies . . . . .   >
Keep file  . . . . . .   *SAME          *SAME, *NO, *YES
Hold file   . . . . . .   *NO           *SAME, *NO, *YES
Spool file name . . >
User reference. . . . . >  *BOX          Alpha value, *SAME...
Generation group . . . . .   >  *OPT          Alpha value, *SAME,  *OPT...
Internal references    :
  Internal Reference 1 . . . . .   >0}
  Internal Reference 2 . . . . .   >
  Internal Reference 3 . . . . .
Descriptive text   . . . . . > 'Splitting by object type'

                                                                    more ...
F3=Exit   F4=Prompt   F5=Refresh      F12=Cancel    F13=Help prompt
F24=Other keys
```

On this second page specification of optional parameters:

- Name of resulting spool files so as to differentiate the originals and the split files
- Completion of user reference (User data) with the index value (*BOX). Thus each spool will be immediately identifiable (this information can be precious to facilitate the processing of mapping and page layouts by Quick-Press)
- Descriptive text for the files generated

↳ ENTER => Splitting execution

Once splitting has been done we will check the result by displaying the spools from our job:

Access: **Menu command line**

- ↳ Enter the WRKJOB command
- ↳ ENTER
- ↳ Option 4 => Spool File Management
- ↳ ENTER

```
                    Management of job spool files

Job     :   P450_S1       User   :   QPJOBLOG         Number :   041091

Select options, then press ENTER.
  2=Modify    3=Hold       4=Delete     6=Release
  7=Messages   8=Attributes   9=Manage the spool file report

                 Unit or                        Total   Page in   No.
Opt    File      file        Reference   Report  pages     rate     ex
 _   TSTOBJD     PRT01       *CMD        RDY      76                1
 _   TSTOBJD     PRT01       *FILE       RDY      36                1
 _   TSTOBJD     PRT01       *JOBD       RDY       1                1
 _   TSTOBJD     PRT01       *MSGF       RDY       4                1
 _   TSTOBJD     PRT01       *PGM        RDY      81                1
 _   TSTOBJD     PRT01       *PNLGRP     RDY       3                1
 _   TSTOBJD     PRT01       *QRYDFN     RDY       1                1
 _   TSTOBJD     PRT01       *USRSPC     RDY      14                1

                                                                  Bottom
Parameters for  les option 1, 2, 3 or command
===> ____________________________________________________________________
F3=Exit   F10=View 3   F11=View 2   F12=Cancel   F22=Printers
F24=Other keys
```

Several spool files with the specified name are found following splitting parameter setup

- The index value is repeated in the "Reference" column
- All the spools generated have retained all the attributes of the original spool
- We note that the original spool file is unchanged; in addition, it is no doubt a spool that you have previously compressed without any difference from a standard spool in the output queue

4.3. The automations

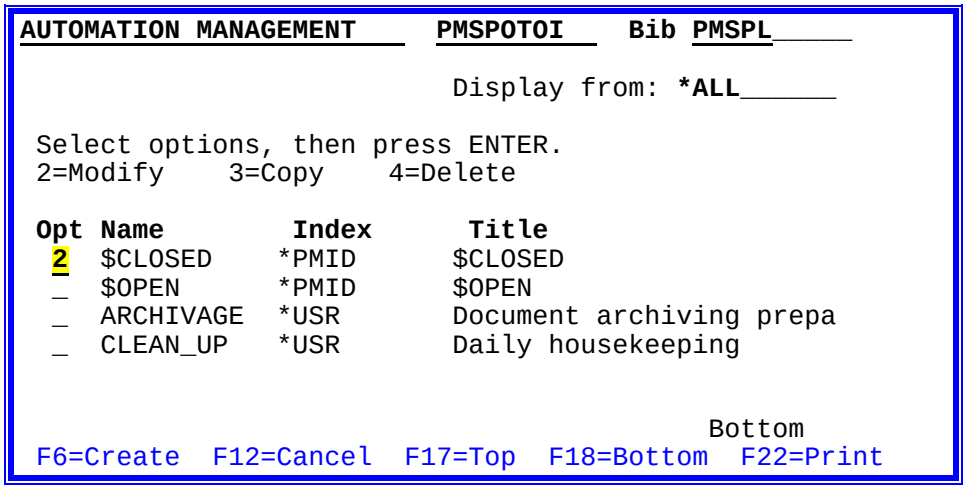
The automations allow handling of all the repetitive processes related to Spool File Management. In the following examples we consider two scenarios:

- Real time automation of splitting a DSPOBJD output (our indexing example in the previous chapter, with the original file secured
- Daily output queue balancing

4.3.1. Automation of "real time" processes

"Real time" processing allows the execution of one or more commands, immediately after the creation of a spool file (upon detection of closure of this by the program).

Access: **Main menu**
- ↳ Option "2" - Operation menu
- ↳ Option "4" — Automations


AUTOMATION MANAGEMENT PMSPOTOI Bib PMSPL
Display from: *ALL
Select options, then press ENTER.
2=Modify 3=Copy 4=Delete
Opt Name Index Title
2 $CLOSED *PMID $CLOSED
_ $OPEN *PMID $OPEN
_ ARCHIVAGE *USR Document archiving prepa
_ CLEAN_UP *USR Daily housekeeping
Bottom
F6=Create F12=Cancel F17=Top F18=Bottom F22=Print

The $CLOSED automation is always present It represents real time processes. We will modify this to set up our different functions.

Step 1 – Function creation

The function is a subset of the automation allowing the separation of each of the processes.

```
AUTOMATION DEFINITION. $CLOSED

 1=Insert function after   2=Modify   3=Hold       4=Delete     6=Release
 M=Move M=Move   C=Copy / A=After     X=Top of list

 Opt Function  Hld TITLE                          IDG File    User.
  1  ----------   Main parameters of the automation       $CLOSED


                                                                Bottom
 F2=Save  F8=Control  F12=Cancel  F17=Top  F18=Bottom  F22=Print
```

↳ Option "1" – Insert a function
↳ ENTER

```
      GENERAL PARAMETERS OF A FUNCTION
 Name  . . . . : TRTOBJD_
 Title . . . . : Processing spools DSPOBJD___
 Inactive  . . : 0          (0=No, 1=Yes)

 Tests   . . . :
  File   . . . : QPRTOBJD_  (generic. *ALL)
  Job    . . . : *ALL______
  User   . . . : *ALL______
  Reference    : *ALL______
  Queue  . . . : *ALL______
    Library    : *ALL______
  Formtype     : *ALL______
  Report format: _          (I,S,C)
  Available    : 1          (0=No, 1=Yes)
  Gp generated : _          (*=All)

 F12=Cancel
```

The following parameters are specified:

- Function name. **TRTOBJD**
- A descriptive label **Processing spools DSPOBJD**
- The files to be used are selected, for our example these are **QPRTOBJD** files

↳ ENTER

Step 2 – Function setup

The function is a subset of the automatism allowing the separation of each of the processes.

The detailed function parameters are accessed. This will include test lines (several tests linked by "AND" or "OR"), and command lines.

```
FUNCTION DEFINITION . :  TRTOBJD    Spool processing DSPOBJD

Options: 2=Modify    3=Hold       4=Delete     6=Release
         T=Insert Test    C=Insert Command     M=Move /    A=After

Opt Label.  Hld Title
 _  ----------      General function parameters TRTOBJD

                                                              Bottom
F12=Cancel   F17=Top    F18=Bottom
```

Test lines.

- ↳ Option "T" – Insert Test
- ↳ Enter

```
        DEFINITION OF A TEST FIELD
  Label         : __________

A/O Field      Test Value
 _  USER_____   EQ  QSECOFR________

F4=Fields  F12=Cancel  F13=Lower.
```

Selection of files belonging to QSECOFR (replace QSECOFR by your user profile)

Recall: The first selection is done at the main function level, when we specified the file name QPRTOBJD.

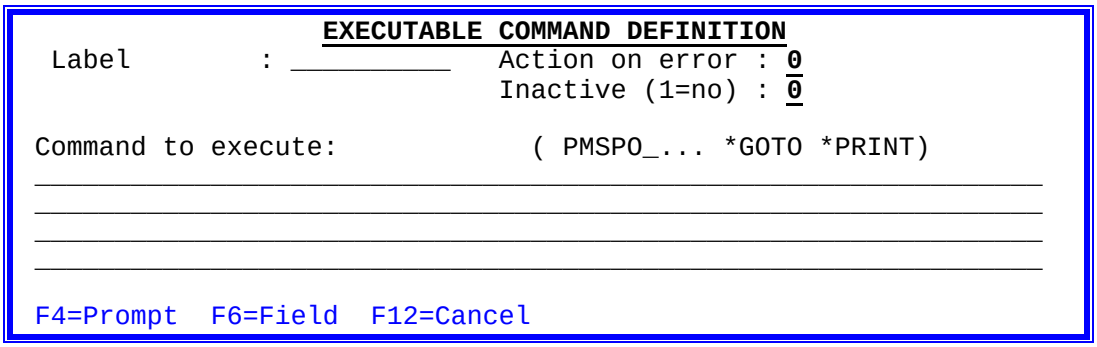
Note: This line serves a double purpose with the main function parameters, but is given as an illustration

- ↳ Enter

```
FUNCTION DEFINITION . :  TRTOBJD    Spool processing DSPOBJD

Options: 2=Modify    3=Hold       4=Delete     6=Release
         T=Insert Test    C=Insert Command     M=Move /    A=After

Opt Label.  Hld Title
  _  ----------      General function parameters TRTOBJD
 C              < > USER       EQ  QSECOFR


                                                              Bottom
F12=Cancel   F17=Top    F18=Bottom
```

Command lines:

- ↳ Option "C" – Insert a command (on the last line)
- ↳ ENTER


EXECUTABLE COMMAND DEFINITION
Label : _____
Action on error : 0
Inactive (1=no) : 0
Command to execute: (PMSPO_... *GOTO *PRINT)
F4=Prompt F6=Field F12=Cancel

The automation accepts any command type (QUICK-SPOOL command, IBM command, program call …)

5. Printing processing functions

To allow user friendly and high performance Spool File Management, QUICK-SPOOL offers a set of commands that can be used in different user environments (interactive and batch, executed from QUICK-SPOOL or externally).

These commands will be included at two levels:

- In user views, to be directly executed as an option by selection of one or more spool files
- In automations, to allow handling of all the repetitive functions that are traditionally performed on spool files

The commands offered take over the environment during execution:

- In **batch mode**, they are directly executed, with the pre-defined parameters
- In **interactive mode**, they cause the display of a user friendly double window, including in one part the main attributes of the selected spool file, and allowing the input by the user of the required parameters in the other (this window can be hidden depending on the way the option is defined)

5.1. Detail of commands

The specific options are grouped in two sets of commands that may be used depending on needs and the environment

- The "PMSPO_xx" type commands can only be used through the user interface, and automations. They cannot be run directly from a command line. They include automatic spool file recognition without it being necessary to enter its location
- The "PMSPO$xxx" type commands that allow spool file references to be given can be run freely in the different contexts offered to the user. They require the specification of the ID of the spool file to be processed.

Note: Apart from the restriction on the use of the "PMSPO_xxx" commands stated above, the processing resulting from the two command types is strictly identical.

The list below gives the available commands

- **PMSPO_CHB** Change box; sort option
- **PMSPO_CHG** Change the spool file attributes
- **PMSPO_COP** Copy a spool file
- **PMSPO_DLI** Delete an access
- **PMSPO_DLS** Move to the "Trashcan", logical deletion option
- **PMSPO_DLT** Delete the spool file and data, with/without index
- **PMSPO_DSA** Display the spool file attributes
- **PMSPO_DSF** Display / formatted printing of the spool file, - running a reformatting model
- **PMSPO_DSP** Display the spool file
- **PMSPO_DST** Distribution to a user, or a distribution list
- **PMSPO_LOD** Reload the attributes from a restored document.
- **PMSPO_PRT** Print a spool file
- **PMSPO_RST** Restore a spool file
- **PMSPO_SAV** Save request
- **PMSPO_SEL** Option selection menu (interactive mode only)
- **PMSPO_SND** Send to a user
- **PMSPO_SNX** Add to an index. (access copy)
- **PMSPO_STK** Store a spooled file in compressed or extended mode
- **PMSPO_UPT** Update the descriptive text.

The following pages present the interactive version of the options as they will be offered to the user when using them through the spool file query interface